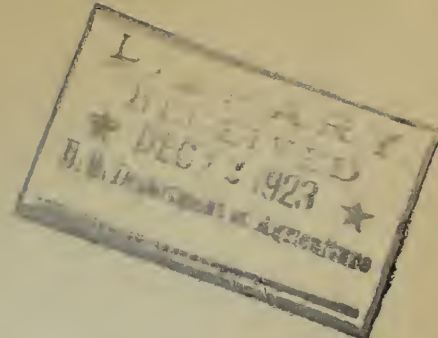


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Bureau of Agricultural Economics



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THE AGRICULTURAL SITUATION IN AUSTRIA

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AGRICULTURAL SITUATION IN AUSTRIA

Brief of Report.

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AGRICULTURAL SITUATION IN AUSTRIA

General Character of Country.

The Austrian Republic consists of what is left of the Old Austrian Kingdom after segregating from it the territories that were ceded to Roumania, Poland, Czechoslovakia, Yugoslavia and Italy. To this residuary part of the Old Kingdom has been added Burgenland, 1,660 square miles, recently ceded to Austria by Hungary. In all, the republic comprises 32,432 square miles and has a population of nearly 6-1/2 million people.

As seen from the accompanying map, the present Republic of Austria is about 1/4 the size of the Old Kingdom of Austria and about 1/8 the size of the former Austria-Hungarian Monarchy.

The following figures give a comparison in area and population between the Austrian Republic and several of the other small European countries in 1920-21.

Area and population, 1920-21.

Country.	Area.	Population.	
		Total.	Per square mile.
	<u>Square miles.</u>	<u>Number.</u>	<u>Number.</u>
Austria	32,432	6,428,000	197
Bavaria.....	29,344	6,900,000	235
Belgium.....	11,197	7,400,000	661
Holland.....	13,127	6,600,000	503
Switzerland.....	15,830	3,700,000	234

Austria's situation is similar to that of Switzerland.

Lying in the center of Europe, the country is distinctly mountainous in

character and its agricultural production is not sufficient to meet the domestic consumption requirements of the population. It has always been necessary for Austria to import large quantities of food stuffs and to cover the balance of trade by industrial and commercial activities.

The place of agriculture among the other activities of Austria is indicated by the table below. In this table the statistics for Burgenland (recently ceded to Austria by Hungary) are recorded separately

TABLE I.
Republic of Austria.
POPULATION 1910 AND 1920 AND OCCUPATION IN 1910.

Country.	Population.				Loss.	
	1910		1920			
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Austria without Burgenland	6,354,919	95.5	6,131,445	95.4	-223,474	-3.5
Burgenland	*296,891	4.5	*296,787	4.6	-104
Total.....	6,651,810	100.0	6,428,232	100.0	-223,578	-3.4

Occupations of the Inhabitants, 1910 **

Country.	Agriculture		Lumbering, Forestry		All other callings.	
	Gardening, etc.		Fishing, Hunting, etc.			
	Number	Per cent.	Number	Per cent.	Number	Per cent.
Austria without Burgenland	1,832,410	28.8	76,425	1.2	4,446,084	70.0
Burgenland	175,618	59.2	1,523	0.5	119,700	40.3
Total.....	2,008,028	30.2	77,948	1.2	4,565,834	68.6

*Provisional figures.

**At the extraordinary census of 1920 the occupation of the inhabitants was not taken.

NOTE: The statistics in these tables are the latest revised figures. These figures, like most of the numerical data in this report, were specially prepared for the Bureau of Agricultural Economics by Court-Councilor Dr. W. Thalmeier, Chief of the Bureau of Statistics, Ministry of Agriculture of the Republic of Austria.

The following table compares Austria's farming populations (contrasted to those engaged in other pursuits) with four of the Danube countries and the United States:

TABLE II.

AGRICULTURAL AND NON--AGRICULTURAL POPULATION.

Country.	Population in 1910 of present or 1921 boundaries.					
	On farms.			Not on farms.		
	<u>Number.</u>	<u>Per cent.</u>		<u>Number.</u>	<u>Per cent.</u>	
		<u>of total.</u>			<u>of total.</u>	
Austria....	2,008,028	30.2	:	4,643,782	69.8	:
Bulgaria...	3,180,816	77.0	:	854,759	23.0	:
Czechoslo-			:			:
vakia....	5,848,523	41.3	:	8,300,144	58.7	:
Hungary....	4,190,527	55.1	:	3,409,890	44.9	:
Roumania...	12,913,317	79.4	:	3,343,860	20.6	:
United States	31,614,269	29.9	:	74,096,351	70.1	:
1920			:			:

From these tables it is seen that with only thirty per cent of her population tilling the soil Austria is not primarily an agricultural State, one of her first efforts must be to develop her crop and live stock production to the maximum in order to cut down the balance in trade forced against her under the necessity of feeding her industrial and commercial population.

PREWAR AGRICULTURE

The manner in which the land now comprised within the Republic of Austria (as compared with the old Austria-Hungarian Monarchy) was utilized in 1913 is brought out in Table III.

TABLE III.

UTILIZATION OF LAND

	Old Austria-Hun-		Republic of Austria			
	garian Monarchy		Including Burgenland:		Burgenland	
	Acres	Percent	Acres	Per cent	Acres	Per cent
Plowed lands	64,745,868	38.7	4,977,669	24.0	463,577	45.7
Meadows	16,007,753	9.6	2,290,133	11.1	94,825	9.3
Pastures	21,431,158	12.8	3,204,625	15.5	66,863	6.6
Gardens	2,135,149	1.3	201,453	1.0	10,781	1.1
Vineyards	1,452,679	0.9	125,129	0.6	16,131	1.6
Forests	52,116,508	31.2	7,766,563	37.5	254,189	25.0
Unproductive	9,143,426	5.5	2,134,274	10.3	108,751	10.7
Totals	167,032,541	100.0	20,699,846	100.0	1,014,917	100.0

The first noticeable feature of this table is the reduced relative standing, a drop from 38.7 to 24 per cent (more than a third) of plowed land in the territory comprised within the present Republic of Austria as compared with the old Austria-Hungarian Monarchy. With a population of 51,390,223 the old monarchy had .8 inhabitants per acre of plowed land; while within the present confines of the Republic of Austria there were 1.3 inhabitants per acre in 1913. Thus the feeding of the populations living in the territory now making up present Austria was always a matter of acute importance to the old imperial government. It was always necessary to draw upon Hungary for wheat, rye and meat to keep Vienna and the other Austrian cities supplied with food. There is no way to solve the food problem of the Austrian Republic without large imports.

THE PREWAR WHEAT AND RYE BALANCE OF THE OLD MONARCHY

The bread deficit of the old Kingdom of Austria was just about covered by Hungary's surplus so that practically the entire Hungarian wheat and rye crop was disposed of within the confines of the old monarchy. The data in the following balance represents the average wheat and rye figures for the years 1909-1913:

Average wheat and rye in terms of flour, 1909-1913.

Old Kingdom of Hungary:

Net yield (harvest less seed).....	Tons <u>1</u>	4,112,771
Received through custom houses (net)...	"	89,931
Total.....	"	<u>4,202,702</u>
Shipped to Old Kingdom of Austria.....	"	1,349,566
Total consumption.....	"	<u>2,853,136</u>

1 Tons of 2000 pounds.

Average yearly consumption by each of Hungary's 20,886,487 inhabitants..	273 lbs.
Consumption per capita per day.....	12 oz.

NOTE:-In making up this bread balance, wheat and rye are considered together. In Czechoslovakia it is estimated that the per capita consumption of wheat (grain) is 198 lbs and rye 220 lbs. per year.

Old Kingdom of Austria:

Net yield (harvest less seed).....	Tons <u>1</u>	3,095,609
Received through custom houses other than Hungarian (net).....	"	121,579
Total.....	"	<u>3,217,188</u>
Shipped from Old Kingdom of Hungary.....	"	1,349,566
Total consumption...	"	4,566,754

Average yearly consumption by each of Austria's 28,571,934 inhabitants....	320 lbs
Consumed per day	14 oz.

The peoples within the Old Kingdom of Hungary ate less bread than the Austrians, making up their ration by greater use of Indian corn and vegetables.

AVERAGE WHEAT AND RYE BALANCE IN 1904-13 WITHIN THE PRESENT
BOUNDARIES OF THE AUSTRIAN REPUBLIC

Crop	Area seeded, Acres.	Yield in Tons.	Less seed	Tons, net yield in grain	Tons net yield in flour
Wheat & Rye	1,643,700	888,895	131,504	757,391	530,174

	Tons of flour
The 6,651,610 population of present Austria consumed yearly, (at the rate of 359 lbs. per capita)...	1,194,000
Production.....	530,174
Normal balance to be imported into the territory now comprising the Austrian Republic	664,000

Under normal pre-war conditions the theoretical amount of wheat and rye flour that the Austrian Republic would have to import to supply normal consumption would have been around six hundred thousand tons. This equals about 800,000 tons of grain. Although there had been a great drop in production, Austria actually imported in 1921 only 525,000 tons of wheat and 50,000 tons of rye as grain and flour, (calculated to a grain basis) of which 300,000 tons was required by Vienna alone.

Austria's Post-War Drop in Production.

Area under cultivation:

Not taking into consideration the territory of Burgenland, whose statistics were not yet included in published reports with those of other

parts of Austria in 1921, we have the following drop in the area of land under plow during the post-war period as compared with the last pre-war normal year 1913:-

	<u>Acres plowed</u>
1913.....	4,514,292
1918.....	4,165,313
1919.....	4,084,121
1920.....	4,040,637
1921.....	4,152,068

This drop reached its low point in 1920, and the country is now on the gain. The causes attending the passing out of cultivation of more than 400,000 acres were purely economic. That is, they were not the results of any land reform movement similar to that taking place in Roumania, since only about 6.1% of Austria's till land is in estates of more than 247 acres*; 93.9% of the land is in small holdings. The great depreciation of the currency of the country, the resulting high cost of labor, the fixing of the price of bread so low that the peasant could not compete with America or even cover cost of production, shortage of draught animals, and inability to purchase commercial fertilizers** were all causes tending to discourage agriculture involving labor operations.

SHORTAGE IN COMMERCIAL FERTILIZERS. (1921)

Item	Carloads of ten tons	
	Required	Delivered
Potash salts	4,250	650
Superphosphate and Thomas meal	14,500	1,800
Nitrogen fertilizers	4,000	700

* However, more than 50% of the forests are held as large estates, 1,236 acres and over.

** The table (taken from "Die Wirtschaftskrafte Osterreichs" von Dr. Karl Hudczek, Wien 1921) gives an idea of the fertilizer shortage.

TABLE IV

AREAS SEEDED TO VARIOUS CROPS IN THE
REPUBLIC OF AUSTRIA.
(Does not Include Burgenland)

Crop	1909-18 Average Acres	1918 Acres	1919 Acres	1920 Acres	1921 Acres
Wheat	459,317	399,860	370,776	371,250	377,742
Speltz	---	301	457	452	445
Rye	960,035	773,495	716,679	714,084	758,350
Wheat & rye mixed	---	19,795	14,757	14,618	15,293
Barley	311,114	254,797	232,573	239,979	266,401
Oats	804,862	651,099	606,050	627,866	664,188
Corn	121,914	112,905	103,957	102,265	112,250
Total Cereals	2,657,242	2,212,252	2,045,249	2,070,514	2,194,669
Potatoes	367,023	287,325	239,351	291,168	327,220
Sugar beets	32,963	21,431	13,279	18,080	18,995
Fodder roots	119,604	86,806	82,045	101,827	106,705
Clover	460,930	365,009	423,077	394,680	424,367
Natural meadows	2,276,678	2,456,559	2,400,060	2,377,104	2,417,565
Artificial "	301,309	344,905	337,944	321,435	319,006
Total Forage	3,158,521	3,253,279	3,243,126	3,195,046	3,267,643

In most cases the low point of production was reached in 1920, while 1921 shows a turn for the better.

It is significant that as the acreage of cereals has decreased the areas under forage and fodder crops has increased. It is natural that the Austrian farmer soon learned the futility of saving the currency that he received in exchange for his farm products since the purchasing power of the Austrian crown was continually dropping. He began to diminish the seeding of crops to be sold for spot cash and to increase his wealth in other ways. The logical way to increase his real wealth was by building up his flocks and herds. Consequently he extended his animal breeding,

let more land go to pasture, put in more grass for forage and planted more fodder.

The actual extent of the drop in cereal acreage is not apparent in Table IV comparing post-war seedings with the ten-year period 1909-1918, because this average period includes several abnormal years during the war. The actual contrast is brought out in Table V on page 15 in which the pre-war period 1904-13 is used as a base for comparisons.

Acreage under five cereals, 1904-13.....	2,724,277	acres
" " " " 1919-21.....	2,081,324	"
Loss.....	642,953	"
Acreage under forage crops, 1904-13.....	2,803,349	"
" " " " 1919-21.....	3,137,181	"
Gain.....	333,832	"

The acreage lost to cereals will be recovered in the future to just the extent that the production of wheat and other grain proves more profitable than the production of meat. The Austrian Government is looking forward to an increase of 25% in the area under cereals.

Drawbacks to Effective Agricultural Operations in Austria.

The Austrian farmer has always operated under difficulties. In the first place, a large portion of the soil is low in plant food, which chiefly accounts for the great dropping off in yield per acre when the supply of commercial fertilizers was shut off by the outbreak of the war. This is indicated in the following table:

AVERAGE YIELD PER ACRE OF WHEAT, SUGAR BEETS AND CLOVER.

Crop	Yields per acre		
	1904-13	1914-18	1919-21
Wheat	20.1 bu.	18.1 bu.	14.1 bu.
Sugar beets	3.6 tons*	9.0 tons	6.5 tons
Clover	1.7 tons	1.6 tons	1.4 tons

* Tons of 2000 lbs.

This can be remedied, however, as soon as the farmer can get the required credits to enable him to purchase fertilizers abroad, since only ammonia-sulphate is manufactured within the republic.

However, even with the use of commercial fertilizers the yield per acre cannot be brought up to a higher standard than in Switzerland since most of Austria's till lands are located in the highlands more than 2,600 feet above sea level. Other things being equal, this limits Austria's production per acre to about 2/3 that of Germany .

The second drawback to effective agriculture is the "strip-system" of land tenure. This strange system is almost incomprehensible to the American farmer. An idea of what is meant by the strip system of ownership can be gained by glancing at the map of the farming district of Steinaus on page 12-A.

This was probably an old estate that was divided up among the peasants more than a century ago. The entire area was recorded as being 675 acres. This land was in the possession of 34 peasants. There were 693 fields which averaged about one acre each. The average length of these fields was 667 feet, the average width 67 feet. Each peasant owned one or more of these tiny plots scattered here and there on the 675- acre tract. A fairly rich peasant would own several, as in the case of Johann

Hirschvogel, whose fields are shown as the shaded areas at the top of the map; or, as in the case of Alois Mayr, whose fields are shown as the shaded areas at the bottom of the map. Each of the other 32 owners had their plots widely scattered throughout this maze of little strips.

The tremendous loss of time and the difficulty in tilling such small plots is obvious.

The system arose out of the enforcement of an ancient law that the heirs of a deceased should share equally in each piece of land of which he died possessed. Sometimes these heirs sold out, but throughout Europe it is a distinct honor to possess land and usually an heir would cling to his heritage however small. This resulted in the parcelation of the land into minute strips.

Only recently the Imperial Austrian Government began a campaign to remedy this system of land tenure, so wasteful of time and energy by concentrating the holdings of a single individual into a few fair-sized fields. Many difficulties had to be overcome in each case because of local prejudices and "conservatism". But great progress was being made when the war opened. The beneficial results of the concentration of individual holdings can be seen by a glance at the map of Steinhaus (page 13-A) after the concentration of the plots owned by a single individual had been effected.

The actual survey of the fields showed the total area of the community to be 579 acres. The number of fields are reduced from 690 to

119, a reduction of 83 per cent. The average size of each field was increased to 5 acres.

Only by doing away with this absurd system of land tenure can Austria hope to bring her production up to maximum.

Austria Plans to Increase Crop Production in Effort to Meet
Internal Requirements.

The Austrian Government is keenly alive to the needs of the present situation and a campaign is planned to bring production up as high as possible. This campaign includes use of better seed and fertilizers, and it also includes an active land reform which will increase the size of individual fields so that they can be cultivated effectively. The following tables, V and VI, contrast the previous performance (before the war, during the war and immediately after the war) with what Austria hopes to accomplish in the next five years, and the highest to which the farmers can probably attain.

These high points may not be attained in practice, but they at least fix the maximums set by the experts of the Austrian Government.

TABLE V.

REPUBLIC OF AUSTRIA

AREAS SEEDED IN PAST YEARS TO VARIOUS CROPS
AND PROPOSED SEEDINGS.

- 15 -

Crop	Before the War 1904 - 13	% of Total Till Land	During the War 1914- 18	% of Total Till Land	After the War 1919-21	% of Total Till Land	Estimate for the next 5 yrs. 1922 -1926	% of Total Till Land	Highest Attain- able	% of Total Till Land
	<u>Acres</u>		<u>Acres</u>		<u>Acres</u>		<u>Acres</u>		<u>Acres</u>	
Wheat	463,312	10.3	430,201	9.5	373,121	8.3	617,750	12.4	741,300	14.9
Rye	1,010,639	20.4	885,606	19.7	723,509	16.0	1,087,249	21.3	1,235,500	24.8
Total Bread Grains	1,473,951	30.7	1,315,807	29.2	1,096,630	24.3	1,704,990	34.2	1,976,800	39.7
Barley	331,114	7.4	285,648	6.3	246,606	5.5	400,302	8.1	494,200	9.9
Oats	895,546	17.9	758,844	16.8	632,082	14.0	850,024	17.1	988,400	19.8
Corn	113,666	2.5	123,056	2.7	106,006	2.4	150,731	3.0	172,970	3.5
Total Fodder Grains	1,250,326	27.8	1,167,548	25.8	984,694	21.9	1,401,057	28.2	1,655,570	33.2
Beans, Peas, etc.	42,995	.9	32,864	.7	20,015	.4	54,362	1.1	61,775	1.2
Potatoes	336,056	7.5	350,141	7.8	285,648	6.3	407,715	8.2	469,490	9.4
Sugar beets	32,123	.7	26,687	.6	16,303	.4	54,362	1.1	66,717	1.3
Fodder beets	185,325	4.7	145,789	3.2	142,577	3.2	197,680	4.0	247,100	5.0
Clover, etc.	442,309	9.8	452,440	10.1	413,645	9.2	444,780	8.9	494,200	9.9
Artificial meadows *	247,100		303,439		326,666		247,100		247,100	
Natural meadows*	2,113,940		2,322,740		2,326,870		2,273,320		2,347,450	
Total forage	2,803,349		3,078,619		3,137,181		2,965,200		3,088,750	

* Not Till-Land.

Note: This table is converted directly from a table prepared by Court Councilor Thalmayer.
No total figure for tilled land area is given.

PRODUCTION AND YIELD PER ACRE OF CROPS IN THE REPUBLIC OF AUSTRIA, 1904-1921, AND ESTIMATES FOR 1922-1926.

Crop.		Before the War Average 1904 - 1913.		During the War Average 1914 - 1918.		After the War Average 1919 - 1921.		Estimated average 1922 - 1926		Estimated maximum obtainable		Yield per acre
		Production.	Yield per acre	Production.	Yield per acre	Production.	Yield per acre	Production.	Yield per acre	Production.	Yield per acre	
Wheat	Bushel	9,321,734	20.1	5,258,320	16.1	5,266,789	14.1	13,778,750	22.3	19,841,400	26.8	
Rye	Bushel	21,758,615	21.5	13,342,931	15.4	10,750,574	14.8	25,982,786	23.9	39,767,857	31.2	
Total Bread Grains	Bushel	31,080,399	21.1	20,601,751	15.7	16,017,363	14.6	39,761,536	23.3	59,209,257	30.0	
Barley	Bushel	7,729,379	23.2	5,412,293	19.0	4,543,313	18.4	10,416,735	26.0	16,534,500	33.5	
Oats	Bushel	25,173,776	31.2	18,897,556	24.8	16,159,718	25.7	30,309,285	36.2	44,092,000	44.6	
Corn	Bushel	2,708,509	23.9	3,137,618	25.5	2,251,841	21.2	4,802,879	31.9	7,164,952	41.4	
Total	Bushel	35,612,164	28.5	27,447,467	23.5	22,954,872	23.3	46,028,899	32.9	67,791,450	40.9	
Peas, peas, etc.	Bushel	525,474	14.6	422,916	12.9	282,924	14.1	970,024	17.8	1,377,875	22.3	
Potatoes	Bushel	44,529,245	132.5	37,696,455	107.8	25,059,588	87.7	60,626,499	148.7	90,756,033	193.3	
Sugar beets	Tons	276,236	8.6	239,442	9.0	109,392	6.5	485,012	8.3	744,052	11.2	
Fodder beets	Tons	1,233,804	6.7	845,310	5.8	795,982	5.6	1,587,312	8.0	3,086,440	12.5	
Hay	Tons											
Clover, etc.	Tons	768,744	1.7	740,580	1.6	561,170	1.4	892,863	2.0	1,322,760	2.7	
Artificial meadows	Tons	356,263	1.4	367,080	1.2	341,217	1.0	385,805	1.6	551,150	2.2	
Natural meadows	Tons	3,400,044	1.6	3,194,653	1.4	2,696,876	1.1	4,056,464	1.3	4,712,333	2.0	
Total hay (all kinds)	Tons	4,525,051	1.6	4,302,233	1.4	3,599,263	1.2	5,335,132	1.8	6,586,243	2.1	
Straw (all kinds)	Tons	3,333,906	1.2	2,160,199	.9	1,960,551	.9	4,229,525	1.3	4,943,816	1.3	
Fruit	Pounds	732,081,522		619,272,140		423,327,292		771,610,000		1,543,220,000		
Wine	Gallons	2,900,597		2,513,244		856,332		2,602,833		3,904,250		

Tons of 2000 lbs.

Note: This table is converted directly from a table prepared by Court Councilor Thalmayer.

Taking cereals as an index, the Government plans not only to increase greatly the areas under cultivation, but also to increase production per acre at least 30% above pre-war levels.

This is a heavy program that can be carried into effect only by concerted action on the parts of the Austrian Government and the Austrian farmer.

The farmer must have credits to enable him to get the necessary fertilizers and to bring his equipment of farm implements up to an efficient modern standard.

There must be an active land reform, not a splitting up of big estates into small holdings, as in the case in many parts of Southeastern Europe, but the concentration of the minute strips of land owned by one man into a few units that can be effectively operated with modern farm implements.

All this is within the realm of the possible, but requires time and capital to bring it into reality. Even if the ideal is not attained, the next few years should see a marked improvement in Austria's balance of trade in cereal and vegetable food supplies.

Animal Industry.

The animal industry of Austria was and is more highly developed than the production of field crops. Her high upland pastures are spec-

ially suited to developing sound breeds of live stock.

Country is Rapidly Recovering From War Requisitions.

War requisitions very greatly depleted Austria's stocks of swine and horses, reducing the former by 50 per cent and the latter by 20.8 per cent, as compared with 1910 numbers. It is possible to quickly bring the number of swine up to pre-war level. This is largely a matter of finding sufficient feed. However, the question of horses is more serious.

TABLE VII

DOMESTIC ANIMALS IN THE AUSTRIAN REPUBLIC IN 1910 AND 1920.
(Includes Burgenland)

Animal	1910	1920	Difference	Per cent of Difference from 1910
Horses	318,652	252,257	- 66,395	- 20.8%
Cattle	2,335,878	2,319,955	- 35,923	- 1.5%
Cows *	1,172,697	1,037,155	- 134,942	- 11.5%
Young stock*	401,804	564,976	+ 163,172	+ 40.6%
Swine	1,932,268	1,354,020	- 578,248	- 29.9%
Sheep	300,783	452,475	+ 151,692	+ 50.4%
Goats	239,147	322,203	+ 83,056	+ 34.7%

* Included under "cattle".

Table VII shows that there was a total loss of 66,395 horses. Of this number, 22,479 were from the city of Vienna, and 31,102 from the two districts of Upper and Lower Austria. The rest of the country suffered but little.

The table shows that there has been a loss of 11.5 per cent of the cows formerly held in the Republic. This loss was confined largely to three districts, 58,000 from Lower Austria, 25,000 from Upper Austria, and 23,000 from Steiermark - all districts easily accessible to the requisition commission. The cattle statistics of Austria are probably inaccurate, just as they are in Czechoslovakia, Hungary, Yugoslavia and other countries of the south east, and the actual numbers of animals being fed is probably much greater than indicated here. During the war the peasants early learned to hide their cattle from the requisition commissions and they have not yet fully recovered from this tendency toward secretiveness. The great gain of 40.6 per cent in young stock speaks well for the future. Austria has increased the number of her sheep 50 per cent. This is due largely to the relaxation of the state control of forests, it being easy to drive the flocks into the woods where they obtained fairly good grazing. The increase in goats to 34.7 per cent more than the pre-war number is significant. An increase of 59,000 took place largely in the district of Lower Austria in connection with the cheese industry.

During the last two years horses have been brought in from Hungary, and cattle and swine have continued to increase. It is probable that the total number of live animals in Austria today is not

only as great as before the war, but materially exceeds the pre-war total.

Before examining Austria's plans for the future development of her live animal industry, it will be well to contrast the pre-war and post-war numbers of her domestic animals per 100 acres as shown in Table VIII.

TABLE VIII.

NUMBER OF DOMESTIC ANIMALS IN THE AUSTRIAN
REPUBLIC ON EACH 100 ACRES OF LAND IN FARMS.

Animal	1910	1920	Difference
Horses	3.05	2.46	- 0.59
Cattle	22.51	22.19	- 0.32
Cows	11.21	9.92	- 1.29
Young stock	3.83	5.40	+ 1.57
Swine	18.50	12.87	- 5.53
Sheep	3.87	4.52	+ 1.45
Goats	3.29	3.09	+ .80

The above losses in horses, cows and pigs do not seem to be great in comparison with the acreage. As pointed out before, Austria does not produce luxurious forage and the problem is not so much producing sufficient numbers of young stock as it is keeping the animals in feed.

Government Plans to Increase Animal Production.

The development of field crop production, cereals, forage, fodder, will go on parallel to the development of Austria's animal industry. Due to the soil conditions of the country, the elevation, climate, etc., it will not be possible for the republic to cover her requirements

of bread and meat by local production. It will always be necessary for her to import both cereal and animal products. It is part of the general plan of the Government to develop the pure-breed side of her live stock industry, exporting breeding animals to the south and east and importing the grade stock from these countries for local consumption. Or she may follow the plan of Czechoslovakia and ship to Western Europe her better grades of fat stock and import the coarser eastern animals for food.

TABLE IX.
PROVISIONING AUSTRIA'S CIVIL POPULATION
FROM

YEARLY DOMESTIC PRODUCTION

PRODUCTS	Before the War 1904 - 1913	During the War 1914 - 1918	After the War 1919 - 1921	Estimate for 1922 - 1925	Possible only if maximums in pro- duction
	6,355,000 Population	5,625,000 10% of the popula- tion was in the army	6,132,000 population without Burgenland	6,500,000 population with Burgenland	7,150,000 population with Burgenland
Flour Rolled Barley & Corn Meal Beans, Peas, etc. Potatoes Sugar Meat Fats (cooking) Butter Milk + Eggs	Total production tons	Total production tons	Total production tons	Total production tons	Total production tons
	530,174	379,579	270,885	692,135	1,064,822
	22,046	44,092	33,069	55,115	66,138
	10,432	7,804	4,691	16,976	25,077
	725,236	695,728	397,551	878,022	1,382,284
	33,148	27,009	11,814	55,291	84,822
	213,952	128,341*	127,225	166,304	284,580
	31,077	19,721*	19,602	24,535	40,693
	27,998	25,353	23,369*	26,014	32,408
	167	135	88	213	298
	Per capita pounds	Per capita pounds	Per capita pounds	Per capita pounds	Per capita pounds
	7	16	11	17	19
	3	3	2	5	7
	228	247	130	270	387
	10	10	4	17	24
	67	46	41	51	80
	10	7	6	8	11
	9	9	8	8	9
	167	135	88	213	298
	7	16	11	17	19
	Gallons	Gallons	Gallons	Gallons	Gallons
	298,776	195,750	152,993	259,943	385,330
	47	35	26	40	54
	350,000,000	260,000,000	222,000,000	315,000,000	480,000,000
	Number	Number	Number	Number	Number
	350,000,000	260,000,000	222,000,000	315,000,000	480,000,000
	Number	Number	Number	Number	Number
	350,000,000	260,000,000	222,000,000	315,000,000	480,000,000
	Number	Number	Number	Number	Number
	350,000,000	260,000,000	222,000,000	315,000,000	480,000,000

* 85,550 additional tons of meat and 13,143 tons of fats used for army.
 * 7,716 additional tons butter unaccounted for. See table IX.
 + Milk converted on the basis of 8.6 lbs. = 1 gal.

For comparing the situations during the different periods the figures under "Pounds per capita" are significant. It shows that during the period after the war the internal production in Austria fell far below production during the war period. This later period covered the time that Austria was passing through her financial and industrial crisis giving rise to a variety of conditions that affected agricultural production unfavorably.

In looking forward to the future an increase in population up to 7,150,000 has been taken into consideration. Even should the relatively high per capita production as indicated in the last column be attained (which is possible) it will still be necessary for Austria to import large quantities of all kinds of foods except possibly milk.

The possible total future demand for agricultural products within Austria, and the amounts required to balance deficiencies in local production has been calculated on a basis of previous records.

Austria Must Supply Her People With a Food
Ration Capable of Sustaining Life.

In Western Europe the food requirement to maintain the average of a people at normal is calculated to be 3,000 calories. Under the mountainous and other conditions of Austria it is probable that this number should be raised to 3,200. From the following table it will be seen that before the war the Austria people averaged somewhat above normal requirements. It must be borne in mind that seventy

per cent of the people are city and town dwellers, and that the above calculations pertain primarily to these urban populations. Before the war the rural population was poorer fed, but since the war, probably better fed than those living in the large communities. During the war the population was on short rations while after the war food supplies fell off until the people were in actual want. The daily ration of 2,030 calories was not sufficient to support normal bodily functions.

TABLE X.

ESTIMATE OF THE ACTUAL FEEDING OF THE CIVIL POPULATION OF AUSTRIA PER CAPITA PER YEAR IN POUNDS AND CALORIES

Article	Before the War 1904 to 1913		During the War 1914 to 1918		After the War 1919 to 1921		Estimate for 1922 to 1926		Possible Only if Maximums in Pro- duction are reached
	Actual Consumption		Actual Consumption		Actual Consumption		Actual Consumption		
	Lbs.	1000 Calories	Lbs	1000 Calories	Lbs.	1000 Calories	Lbs.	1000 Calories	
Flour	559	522	253	374	185	269	344	499	499
Rolled Barley & Corn Meal	11	16	13	19	20	29	11	16	16
Beans, Peas, etc.	20	23	26	30	33	38	29	33	30
Potatoes	344	125	353	128	397	144	459	166	166
Sugar	46	84	55	100	33	60	44	80	80
Meat	145	66	110	50	66	30	88	40	48
Cooking Fat	33	135	22	90	13	54	18	72	90
Butter	26	96	18	64	11	40	18	64	80
Milk	463	141	386	116	282	86	392	119	138
Eggs	13	8	10	6	6	4	9	6	7
Total		1,216		977		754		1,095	1,154
Calories per Capita Per day	3,330		2,680		2,070		3,000		3,160

From the columns "Actual Consumption in Pounds" it will be seen that Austria plans to make less use of cereals, meat, milk, butter and eggs than she did before the war, substituting potatoes and beans in their places. It is a great question whether this can be done. The working man and the farmer are eating more meat than formerly and will continue to live better than they did before the war. This is bound to raise the consumption in pounds and calories above those given in the last heading of this table and will modify upward the import requirements forecasted in the next table.

In this table for each period the first column gives the total internal consumption in thousands of tons. The next column the total internal production; while the fourth column gives amounts required to balance the deficit. Actual imports may have been more or less than indicated here. The third and fifth columns are the percentages of production and import respectively referred to total requirement.

TABLE XI

TOTAL YEARLY REQUIREMENT

BALANCED AGAINST DOMESTIC PRODUCTION AND AMOUNT OF IMPORT NECESSARY TO COVER DEFICIT TONS

Article	Before the War (1904 - 1913) For 6,355,000 Inhabitants.			During the War (1914 - 1918) For 5,625,000 Inhabitants			After the War (1919 - 1921) For 6,132,000 Inhabitants			Estimate for the next five years 1922 - 1926, for 6,500,000 Inhabitants			Highest Attainable.							
	Require- ment	Domestic Production		Re- quired Import	Re- quire- ment	Domestic Production		Re- quired Import	Re- quire- ment	Domestic Production		Re- quired Import	Re- quire- ment	Required Production		Domestic Import				
			% of re- quire- ment				% of re- quire- ment					% of re- quire- ment				% of re- quire- ment				
	total tons	total tons		total tons	total tons	total tons		total tons	total tons	total tons	% of re- quire- ment	total tons	total tons	total tons	% of re- quire- ment	total tons	total tons	% of re- quire- ment	total tons	
Flour	1,140,881	530,174	46.5	610,707	725,313	379,579	52.3	345,734	567,685	270,885	47.7	296,800	1,116,630	692,135	62.0	424,495	1,256,622	1,064,822	84.7	191,800
Rollod Barley, etc.	35,274	22,045	62.5	13,228	37,478	44,092	117.6	-	60,627	33,069	54.5	27,558	36,376	55,115	151.5	-	39,683	66,138	166.7	-
Beans, Peas, etc.	62,831	10,432	16.6	52,399	73,854	7,804	10.6	66,050	101,412	4,691	4.6	96,721	92,593	16,976	18.3	75,617	94,798	25,077	26.5	69,721
Potatoes	1,092,379	725,236	66.4	367,143	997,582	695,728	69.7	301,854	1,215,837	397,551	32.7	817,286	1,488,105	878,022	59.0	610,083	1,636,916	1,382,284	84.4	254,632
Sugar	146,606	33,148	22.6	113,558	155,424	27,009	17.4	128,415	101,412	11,814	11.6	89,598	143,299	55,291	38.6	88,008	157,629	84,822	53.8	72,807
Wheat	462,966	213,952	46.2	249,014	309,746	128,341	41.4	181,405	202,823	127,221	62.7	75,602	286,598	166,304	58.0	120,294	378,089	284,580	75.3	93,509
Cooking Fat	104,719	31,077	29.7	73,642	61,729	19,721	31.9	42,008	40,785	19,602	48.1	21,183	57,320	24,535	42.8	32,785	79,366	40,693	51.3	38,673
Butter	83,775	27,998	33.4	55,777	49,604	25,353	51.1	24,251	34,171	23,369	68.4	10,802	57,320	26,014	45.4	31,306	79,366	32,408	40.8	46,958
Milk (Gallons)	352,667	298,776	84.7	53,891	260,207	195,750	75.2	64,457	207,373	162,993	78.6	44,381	305,116	259,943	85.2	45,173	388,330	388,330	100.0	-
Eggs(Millions)	662	350	52.9	312	450	260	57.8	190	319	222	69.6	97	455	315	69.2	140	600	480	80.0	120

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[illegible]

Relatively Heavy Food Imports Necessary.

Before the war, the Republic of Austria imported 53.5 per cent of the flour; 84.2 per cent of its beans and peas; 53.8 per cent of its meat; 15.3 per cent of its milk and 47.1 per cent of its eggs consumed within the country. During the three-year post war period terminating in 1921, these percentages of imports had somewhat fallen off although production had decreased. This was due to the fact that the people had reduced their food consumption about one-third of normal.

When normal food consumption is resumed after at least another four years, it is the aim of the Government to have so increased production that the imports will be reduced to 15.3 per cent of the flour; 73.3 per cent of beans and peas; 15.6 per cent of the potatoes; 46.2 per cent of the sugar; 48.6 per cent of the cooking fat; 59.7 per cent of the butter, and 20.0 per cent of the eggs consumed within the country.

This means that the Austrian Republic through its agricultural reforms expects to so raise production that the amounts of the yearly imports of food stuffs will be greatly reduced below pre-war averages as summarized in the following table:

Article.	:	Estimated prob- able yearly imports during next five years.	:	Estimated minimum to which imports can possibly be re- duced in future.
Flour tons	:	350,000	:	200,000
Beans, peas, etc..... "	:	70,000	:	69,000
Potatoes..... "	:	615,000	:	255,000
Sugar..... "	:	88,000	:	72,000
Meat..... "	:	120,000	:	93,000
Cooking fats..... "	:	33,000	:	38,000
Butter..... "	:	31,000	:	48,000
Eggs, millions.....	:	140	:	120

The figures in the last column take into consideration an increase in population to more than seven millions. But they do not take into consideration the higher standard of living that has been adopted by the Austrian peasants and the working men in the industrial centers. It is too early to predict numerically the effect of this demand for better food. It is certain, however, that the people are eating more meat and that the general effect will be to revise upward most of the figures in the last column.

NOTE ON BURGENLAND.

Up until 1922 the statistics of Burgenland are not included by the Austrian Department of Agriculture in their crop reports. But in the preliminary reports for 1922 the increased areas seeded to cereals are largely due to the inclusion of Burgenland statistics.

Burgenland is a strip of rich agricultural land ceded by Hungary to the Republic of Austria. According to the frontiers set in 1921 the total area of the district is 1,014,917 acres. It has a population of 296,787, of which 59.2 per cent are engaged in agriculture.

AREA, PRODUCTION AND CONSUMPTION OF CEREALS IN
BURGENLAND, AVERAGE 1911-1915.

Crop	Acres.	Per cent of total area.	Bushels Yield	Bushels Seed	Bushels Net Pro- duction	Bushels Consumed	Surplus or deficiency. Bushels.
Wheat	125,539	32.3	2,512,682	373,349	2,139,333	1,469,568	+ 669,765
Rye	85,440	21.9	1,582,458	272,244	1,310,214	426,204	+ 884,010
Total Bread Cereals	210,979	54.2	4,095,140	645,593	3,449,547	1,895,772	+1553,775
Barley	82,811	21.3	2,275,988	219,073	2,056,915	677,051	+1379,864
Oats	50,660	13.0	1,940,241	220,343	1,719,898	612,755	+1107,143
Corn	44,656	11.5	1,123,019	23,522	1,099,497	2,761,541	-1662,044
Total Fodder Cereals	178,127	45.8	5,339,248	462,938	4,876,310	4,051,347	+ 824,963
TOTAL	389,106	100.	9,434,388	1,108,531	8,325,857	5,947,119	+2378,738

This district of Burgenland produced a surplus of cereals with the exception of corn which was imported in relatively large quantities for fattening steers and swine for the Austrian and German markets.

In comparing the crop years 1920 and 1921 with the pre-war period it is seen from the following table that in 1921 there was considerable improvement over 1920:

REPUBLIC OF AUSTRIA.

Area seeded in 1920 and 1921 compared with the prewar period, 1904-1913.

Crop.	: Average : : 1904-1913 :		: Decrease 1920 : : compared with : : average, 1904-13 :		: Decrease 1921 : : compared with : : average 1904-1913.	
	: 1920.* :	: Area. : Per : : : cent. :	: 1921.* :	: Area. : Per : : : cent. :	: 1921.* :	: Area. : Per : : : cent. :
Wheat	: 463,300 :	: 371,300 :	: 92,000 :	: 19.9 :	: 377,700 :	: 85,600 : 18.5
Rye	: 1,010,700 :	: 728,700 :	: 282,000 :	: 27.9 :	: 773,600 :	: 237,100 : 23.5
Total bread cereals.	: 1,474,000 :	: 1,100,000 :	: 374,000 :	: 25.4 :	: 1,151,300 :	: 322,700 : 21.9
Barley	: 331,100 :	: 240,000 :	: 91,100 :	: 27.5 :	: 266,400 :	: 64,700 : 19.5
Oats	: 805,500 :	: 627,900 :	: 177,600 :	: 22.0 :	: 664,200 :	: 141,300 : 17.5
Corn	: 113,700 :	: 102,300 :	: 11,400 :	: 10.0 :	: 112,300 :	: 1,400 : 1.2
Total fodder cereals.	: 1,250,300 :	: 970,200 :	: 280,100 :	: 22.4 :	: 1,042,900 :	: 207,400 : 16.6
Total	: 2,724,300 :	: 2,070,200 :	: 654,100 :	: 24.0 :	: 2,194,200 :	: 530,100 : 19.5

*Burgenland not included as at the time of collecting these statistics the frontiers of this district were not fully determined.

The 1922 Statistics of Austria cannot be compared directly with those of 1921 because in 1922 the areas seeded to cereals in Burgenland were included with those of the rest of Austria. If we add to the Austrian pre-war average in the foregoing table the Hungarian pre-war average for the territory comprised within the present boundaries of Burgenland we can compare the 1922 records to this combined pre-war average and thus get an approximate percentage of the drop below pre-war which is comparable with the 1921 drop. Thus we have:

REPUBLIC OF AUSTRIA.

(Including Burgenland)

Comparison of the crop year with the prewar average.

Crop.	Area seeded.		Decrease 1922 compared with pre-war average.	
	Prewar Average.*	1922.	Acres.	Per cent.
	Acres.	Acres.		
Wheat	588,800	453,700	135,100	22.9
Rye	1,096,200	830,900	265,300	24.2
Total bread cereals.	1,685,000	1,284,600	400,400	23.8
Barley	413,900	309,100	104,800	25.3
Oats	856,200	703,500	152,700	17.8
Corn	158,300	148,500	9,800	6.2
Total fodder cereals ...	1,428,400	1,161,100	267,300	18.7
Total	3,113,400	2,445,700	667,700	21.4

* Austria without Burgenland, 1904-13. Burgenland 1911-15.

Comparing 1922 with 1921 areas directly, it appears that in 1922

Austria improved her seeding of cereals by 251,500 acres. This was due to the added areas seeded in Burgenland. When the 1922 areas are compared to a pre-war average including Burgenland territory it is found that Austria dropped 1.9 per cent below the 1921 seeding.

This falling off in cereal areas for the crop of 1922 was quite universal through the Danube basin.

Increase in Meadows and Pastures is an Index of the Extension of the Animal Industry.

It is possible to obtain pre-war figures relative to the way land was utilized within the present boundaries of the Republic of Austria only for the year 1900, so that the comparison between conditions in 1921 and pre-war conditions includes changes to influences that have been at work during the past two decades. The general result has been a sharp drop in till land and a marked increase in meadows and pastures accompanying the extension of animal industry under both the monarchy and the republic.

Comparison Between The Manner In Which Land Was Utilized Within The Confines of The Republic Of Austria * In 1921 And 1910.

Character of Utilization	Area in Acres.		Increase (+) or decrease (-)
	1910	1921 *	
Tilled land	4,514,300	4,152,100	- 362,200
Meadows	2,195,300	2,433,000	+ 237,700
Pastures	3,137,800	3,282,100	+ 144,300
Gardens	190,600	177,600	- 13,000
Vineyards	109,000	90,000	- 19,000
Forests	7,512,400	7,557,100	+ 44,700
Unproductive	2,025,500	1,993,000	- 32,500
	19,684,900	19,684,900	

* Does not include Burgenland; see table page 35 for total acreages.

The great differences between pre-war agriculture and that of 1921 is the 362,000-acre drop in tilled land and the 382,000 acre increase in meadows and pastures.

Note:

The Bulletin of the International Institute of Agriculture issued in August, 1923, gives the area and production of the five chief cereals as follows:

Crop	Area in Acres.	Production in Bushels
Wheat.....	459,500	7,422,000
Rye.....	833,700	13,589,000
Total bread cereals....	1,293,200	21,011,000
Barley.....	313,100	5,599,000
Oats.....	703,700	13,317,000
Corn.....	148,300	3,477,000
Total.....	2,468,300	48,404,000

The Institute has made no estimates, either of acreage or production for 1923, but crop conditions are reported as average or better than average.

